

REMARKS

Claims 25-32, 34-38, 40-43 and 45-48 are pending in the present application. None of the claims were amended in this response. Favorable reconsideration is respectfully requested.

Claims 25-32, 34-43, and 45-48 were rejected under 35 U.S.C. §103(a) as being unpatentable over *Uesugi et al.* (EP 0893,889) in view of *Hogan* (US Pub 2001/0018741). Applicants traverse these rejections. Favorable reconsideration is respectfully requested.

Specifically, the cited art, alone or in combination, fails to teach “embedding the power control information in a timeslot structure together with further data to be transmitted in the same timeslot to said transmitter; coding, in the receiver, the power control information in one time slot in a manner where the power control information is coded, with the addition of redundancy, together with the further data to be transmitted in the same time slot to form a common data word, with at least one bit value in the data word depending on the power control information and on the further data; transmitting the coded power control information in one timeslot to the transmitter, together with the further data to be transmitted in the same time slot; and setting, in the transmitter, the transmission power as a function of the transmitted coded power control information” as recited in claim 25 and similarly recited in claim 37.

Under the recited configuration, the power control information, transmitted in one timeslot, is coded together with further data which is intended to be transmitted in the same timeslot. Both the power control information and this further data or information are transmitted so that the power control information (e.g., TPC bits) transmitted in one timeslot is not simply transmitted repeatedly, but is coded together with further bits, which are intended to be transmitted within the same timeslot. The further bits may be, for example, the bits in the TFI information (TFI bits) in a mobile radio system. However, it is understood that other bits, for example data bits, also can be used for coding with the TPC bits, provided they are intended to be, or can be, transmitted in the same timeslot at the TPC bits.

In contrast, *Uesugi* discloses a method and an apparatus for adjusting the transmitting power in a CDMA communication system, where (1) a rate judging apparatus judges the rate of transmission data by a first slot of a transmission frame, (2) a level controller which carries out processing by which the transmission power of transmission control information given to the top of the respective slots after the second slot is made identical to that of the transmission data, and

(3) a transmitter transmits frames processed by uniform transmission power responsive to the result of the judgment (col. 3, lines 16-26). Under this arrangement, transmission frames are purportedly transmitted with uniform transmission power regardless of the transmission data rate (col. 4, lines 28-35).

In col. 19, lines 48-51 and FIG. 16B, Uesugi discloses a case where the transmission data rate is low, thus prompting the CDMA communication apparatus to *repeatedly transmit* transmission data along with the controlling information and transmission data (see also col. 6, lines 33-42). This is done according to Uesugi to account for transmission data (1200) that is spread-controlled by spread controller 1201. Thus, if the transmission data rate is low, the transmission data is processed so that it has a small amplitude and a long symbol length (hence the repeating), and if the transmission data rate is high, the transmission data is processed so that it has a large amplitude and a short symbol length.

The Office Action alleges that col. 12, line 41 - col. 13, line 2 (FIGs. 16A-B) discloses the feature of "embedding the power control information in a timeslot structure together with further data to be transmitted in the same timeslot." Applicant respectfully submits this is incorrect. The Disclosure in Uesugi clearly shows that the time multiplexer 1203 multiplexes the pilot symbol 1202 and the power controlling signal (TPC) 1207, and the transmission data is CDMA-modulated by CDMA modulator 1204, amplified, and transmitted through antenna 1206 (col. 12, lines 35-47). It is apparent to the Applicant that the CDMA modulation of Uesugi does not represent the encoding process described in the present claims, where the receiver codes the power control information in one time slot in a manner where the power control information is coded, with the addition of redundancy, together with the further data to be transmitted in the same time slot to form a common data word, with at least one bit value in the data word depending on the power control information and on the further data.

Under the claimed configuration, a number of bits are encoded together (e.g., a number of output bits are formed dependent on the number of input bits wherein at least a part of the output bits are dependent on a number of input bits) (therefore not only on one). As a result of coding, a common data word (e.g., block code) is formed, where one bit value in the data word is dependent upon the power control information and on the further data. Also, the claim provides for redundant encoding. The Uesugi reference is silent in this regard and instead teaches combined multiplexing of a spread code provided by the spread controller (1201). Uesugi

clearly states that multiple time slots are used for the different signals (see, e.g., col. 19, lines 1-4: [i]f the data rate is low, pilot symbol 4051, TPC signal 4052 or data symbol 4053 is transmitted by the same transmission power in slots including and after the second slot as shown in FIG. 14G"; see also col. 18, lines 1-6, 29-30, 38-39).

Also, no redundancy is disclosed in Uesugi, *with respect to the one time slot* - in col. 19, line 48 - col. 20, line 9, the reference clearly states that the *entire transmission data* is retransmitted regularly to establish a proper data rate. Also, as the Office Action has conceded, Uesugi fails to teach or suggest "one bit value in the data word depending on the power control information and on the further data."

Regarding Hogan, the application discusses XOR logic, where error correction bits are added to a code word in an ECC block related to a data storage computer system (see Abstract). While ECC bits are dependent on the data word, the bits are taken from an encryption mask ([0027]) and appended to the codeword ([0036-37]). Aside from the isolated fact that ECC bits are related to the codeword through the XOR function, Hogan clearly does not disclose that one bit value in the data word depends on the power control information and on the further data.


Moreover, there is no apparent reason why one skilled in the art would combine Hogan and Uesugi in the manner suggested in the Office Action. Contrary to the Office Action's assertion that Hogan is in an analogous art, Applicant respectfully submits that the two references are disparate. Hogan deals with encrypted "heroic data recovery" related to computer storage systems, where destroyed data may be recovered (see [0006]). As discussed above, Uesugi deals with adjusting the transmitting power in a CDMA communication system. Hogan also teaches that the ECC blocks are used in an encrypted manner to allow secure data recovery (see, e.g., claim 1). As discussed above, Uesugi relies on retransmission of data blocks to establish a proper data rate. Paradoxically, the Office Action asserts that incorporating Hogan into Uesugi would "reduce the need for retransmission of lost data," which runs expressly counter to the teaching in Uesugi, since retransmission is needed to be able to distinguish between different data rates (see col. 19, line 57 - col. 20, line 6). Furthermore, the Office Action fails to explain the manner in which an encrypted XOR function would conceivably operate in Uesugi - which bits are to be XORed? If the data is encrypted, how does Uesugi effectively deal with each re-transmission and related multiplexing? It appears to the Applicant that such a combination is not possible.

For at least these reasons, Applicant respectfully submits the rejections are improper and should be withdrawn. In light of the above, Applicant respectfully submit that claims 25-32, 34-38, 40-43 and 45-48 are allowable. Applicants respectfully submit that the patent application is in condition for allowance and request a Notice of Allowance be issued. The Commissioner is authorized to charge and credit Deposit Account No. 02-1818 for any additional fees associated with the submission of this Response. Please reference docket number 112740-344.

Respectfully submitted,

BELL, BOYD & LLOYD LLC

BY

A handwritten signature in black ink, appearing to read 'Peter Zura', is written over a horizontal line.

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Dated: July 20, 2007